

Amendments to the Claims

The listing of claims will replace the previous version, and the listing of claims:

Listing of Claims

1-26. (Canceled)

27. (Currently amended) A motion picture encoding or decoding system for sequentially encoding or decoding a motion picture as a unit, the unit being formed of a plurality of successive frames, comprising:

necessary operation volume calculating means for calculating an operation volume necessary for encoding or decoding a present frame,

deciding means for deciding operating power-supply voltage - substrate bias voltage - operating frequency, said deciding means deciding the operating frequency capable of encoding or decoding the operation volume necessary for encoding or decoding the present frame within a time allocated in advance, and the operating power-supply voltage and the substrate bias voltage corresponding to the operation frequency, and

a processor implemented with MOS transistors laminated on a semiconductor substrate, the processor controlling the operating power-supply voltage, the operating frequency and the substrate bias voltage,

wherein the deciding means calculates the operating frequency capable of encoding or decoding the operation volume necessary for processing the present frame within the allocated time based on the operation volume, and

the processor selects an actual operating frequency exceeding the necessary operating frequency within an operable frequency and most close to the operating frequency, and decides an actual

operating power-supply voltage and an actual substrate bias voltage to make a power consumption minimum to the selected frequency, the processor operating steadily in the present frame with the actual substrate bias voltage, the actual operating power-supply voltage and the actual operating frequency decided by the deciding means while the encoding or decoding means encodes or decodes the present frame, and

said system further comprising:

failure situation avoiding means for avoiding a failure situation which occurs when the necessary operation volume calculated by the necessary operation volume calculating means is smaller than an actual necessary operation volume, the failure situation avoiding means increasing the operation volume calculated by the necessary operation volume calculating means by a prescribed value.

28. (Cancelled)

29. (Currently amended) A motion picture encoding or decoding method for sequentially encoding or decoding a motion picture as a unit, the unit being formed of a plurality of successive frames, the method using:

necessary operation volume calculating means for calculating an operation volume necessary for encoding or decoding a present frame,

deciding means for deciding operating power-supply voltage - substrate bias voltage - operating frequency, said deciding means deciding the operating frequency capable of encoding or decoding the operation volume necessary for encoding or decoding the present frame within a time allocated in advance, and the operating power-supply voltage and the substrate bias voltage corresponding to the operation frequency, and

a processor implemented with MOS transistors laminated on a semiconductor substrate, the processor controlling the operating power-supply voltage, the operating frequency and the substrate bias voltage,

wherein necessary operation volume calculating means includes a step of calculating the operation volume necessary for encoding or decoding the present frame,

the deciding means includes a step of calculating the operating frequency capable of encoding or decoding the operation volume necessary for processing the present frame within the allocated time based on the operation volume, and

the processor includes a step of selecting an actual operating frequency exceeding the necessary operating frequency within an operable frequency and most close to the operating frequency, and deciding an actual operating power-supply voltage and an actual substrate bias voltage to make a power consumption minimum to the selected frequency, the processor operating steadily in the present frame with the actual substrate bias voltage, the actual operating power-supply voltage and the actual operating frequency decided by the deciding means while the encoding or decoding means encodes or decodes the present frame,
and

said method further comprising:

a failure situation avoiding step for avoiding a failure situation which occurs when the necessary operation volume calculated by the necessary operation volume calculating step is smaller than an actual necessary operation volume, the failure situation avoiding step increasing the operation volume calculated by the necessary operation volume calculating means by a prescribed value.